EVALUATION OF SOCIAL DEVELOPMENT PROGRAMS:

A MANUAL

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I. THE EVALUATIVE QUESTIONS

Evaluation research, as with all other research, is supposed to provide answers to specified questions. The adequacy of the research results is dependent, to a considerable extent, on the adequacy of the questions which generated the research.

The most obvious evaluative question is - "Was the program successful?". This is a good place to start but considerable refinement is needed before an adequate research question is yielded. Firstly, success rarely comes on a straight yes/no basis - it is a matter of degree. Our first revision, then, leads to the following - "To what extent was the program successful?".

The answer to this question, while helpful, is of limited utility to other practitioners in the field. Imagine, for example, a community worker in Calgary who learns that a very successful anti-vandalism program is running in the east end of Halifax. To develop the program in Calgary, there are at least two additional pieces of required information before he or she can begin developing the program in Calgary.

1. What was the setting of the program? Was the target community similar to the community which needs an anti-vandalism program in Calgary?
2. What was the precise nature of the program? What actions were undertaken and which of these actions appeared to be critical in helping the program achieve its results?

As a simplistic example of the second point, suppose the Halifax group had attempted two concurrent approaches to combat vandalism - the development of a citizen group to increase the public's awareness of the problem and the development of recreational programs for youth. Suppose, further, that because of pre-existing factions

within the community, the development of the citizens group was a dismal failure although the recreational programs took off with a bang. The subsequent evaluation shows that vandalism decreased significantly during the period of program operation. Apparently, therefore, the recreational programs were the critical element in reducing vandalism - not the development of a citizens group. It is important that the worker in Calgary know about this.

This, then, represents an evaluation of the actions undertaken - of the "process" of the program. Not surprisingly, this is often called the process evaluation.

The evaluation of program success, discussed previously, is often referred to as the outcome evaluation.

The description of the setting of the program is the community profile.

The importance of differentiating between the process and outcome components of the evaluation cannot be overstated. Let's return to our beleaguered community worker in Calgary. After reading about the Halifax project, a report is received which depicts an anti-vandalism program in Vancouver which involved the development of citizens groups and recreational programs. This program was an abysmal failure. The worker corresponds with their counterpart in Vancouver and, after much digging, discovers that after one year of operation, only two people were interested in the citizens group and three teenagers had turned out for the much planned recreational programs.

The program obviously failed in Vancouver because it was never implemented. The outcome evaluation was an evaluation of a non-event.

The extent to which the program is implemented is a component of the process evaluation. Remember, then, to differentiate between the evaluation of outcome and the evaluation of process and make sure that both are covered in your overall program evaluation.

The important point to keep in mind here is that the key audience for your evaluation is your colleagues. If social development programs are to advance, they need the kind of knowledge base that informs all of us about what sort of interventions appear to have the desirable effect in given situations - given a particular problem, what appears to work and what appears not to work.

The primary purpose of your evaluation, then, is to produce the kind of information that your colleagues need if they are going to attempt the same kind of intervention that you have attempted.

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II. THE EVALUATION MODEL

The evaluation model which is described in this paper is based upon the expressed goals and objectives for the program. This is the only meaningful way of evaluating programs of a social development nature. This focus upon goals and objectives is of particular importance, given the usual lack of attention that they receive. A significant portion of this model, therefore, is concerned with the development of an adequate set of goals and objectives.

This serves to illustrate the powerful interdependence of planning and evaluation. These two activities are almost completely inter-related - it is impossible to carry out one without the other.

This model also serves to focus the attention away from the old "red herring" of quantification. The usual reaction to social development evaluation concerns the apparent impossibility of quantifying the effects of social development programs.

The past use of this model has demonstrated time and again that, when evaluation is preceded by adequate planning, the quantification of outcome is the simplest part of the whole process. As the planning proceeds, quantitative indicators almost suggest themselves.

The essential steps in applying this model are as follows:

1) Clarify program goals and objectives, starting with outcome goals, through the development of a goal hierarchy;
2) Priorize goals in the hierarchy;
3) Identify quantitative indicators of outcome;
4) Develop program plans or action plans using goal indicators;
5) Develop activity objectives;
6) Quantify activity objectives;
7) Identify required resources and possible measurement.

The actual evaluation report should address the following issues:

1) What was accomplished - i.e. what were the outcomes and their priority (Steps 1, 2, 3 above);

2) What was done to accomplish this - i.e. what activities were undertaken and which ones attained their goals (Steps 4, 5, 6 above);

3) What resources were required to accomplish this (Step 7).

The important point to remember here is that the most important audience for your evaluation is your colleagues. The question to constantly keep in mind is - "What information do my counterparts in other areas need if they are planning on dealing with the same problem or issue?". It is this information which is of key importance.

* * * * * * * * *

III. DEVELOPING PROGRAM GOALS AND OBJECTIVES

The most important phase of evaluating a program, whether preventative or rehabilitative, is the formulation of program goals. They serve as the benchmark against which the success of the program is measured. Unfortunately, however, they rarely receive adequate attention in program planning.

A concern with goals and objectives is not unique to the community service environment. It has also been a long-time preoccupation of the private sector, culminating in the present day administrative approaches of "management by objectives" and "management by results".

William Newman (1950) in one of the classical guides on business administration summed up the importance of goals as follows:

> "Distinctive benefits of setting up goals include: (1) Purposeful and integrated planning is made easier. (2) Unproductive work is more likely to be avoided. (3) Operating goals, or standards, can be used as building blocks in developing programs. (4) Goals also serve as standards for purposes of control, and they play an important part in motivation. (pg 27-28)"

The early writing of Peter Drucker (1958) and E.C. Schleh (1961) have been refined into fairly comprehensive systems of management by objectives and results by writers such as Karl Albrecht (1978).

The criteria for writing effective goal statements as set out by Albrecht are presented in Table I.

TABLE I: THE CHARACTERISTICS OF AN EFFECTIVE GOAL STATEMENT
(reproduced from Albrecht (1978) pg 75-76)

SPECIFIC - It spells out, in concrete terms, what is to be achieved, to what degree, and the deadline for achieving it. It uses very specific terms instead of abstractions. It focuses on performance, and it uses performance variables whenever possible. It tells how much, how many, how big, how small, etc. Or, it identifies specific qualitative conditions which leave no doubt as to their attainment.

PAYOFF-ORIENTED - It identifies a set of end conditions which have intrinsic value, or which are associated with something of value. It is clearly a worthwhile thing to achieve; there is an unquestionable element of value in the conditions it identifies.

INTRINSICALLY REWARDING - It specifies a desired set of conditions which will bring rewards to the person who is to strive for them. That is, there must be associated with the goal a reward which the "action person" wants and is willing to work for. This may be simply a matter of recognition accorded the action person for achieving it; or it may be a payoff associated directly with the goal. But, in any case, it is only a goal in the eyes of the action person if he himself can foresee a personal payoff in accomplishing it.

REALISTIC - It identifies a target which is reasonably attainable. It accounts for practical experience and various uncertainties, and it allows a reasonable margin for error. It rests upon reasonable assumptions about the future and about the people who will work to achieve the goal.

OBSERVABLE - It specifies a set of conditions which can be detected, a target which can be identified to the satisfaction of all concerned, especially the people responsible for its achievement. These conditions will be clearly recognizable when the goal has been achieved.

MISSION STATEMENTS, GOALS, OBJECTIVES AND ACTION PLANS

Albrecht uses, as a starting point in his discussion of goals, the concept of "fuzzies" which are simply vague statements of intent which are not specific enough to allow for a recognition of whether or not it has been achieved. In community services, these phrases are often called "mission statements" or, in a less complimentary vein, "motherhood statements".

The family service mission of "strength to families" would be a community service example. In community-based preventative programming, a statement such as "the improvement of the quality of life in the Baxter neighbourhood" would fall into this category. In Albrecht's schema, the mission statements are the necessary starting point in any process of goal definition. This should be followed by the development of more specific goals and action plans for their attainment.

There is considerable semantic confusion around the terms "goals" and "objectives" in terms of their relative specificity. Some writers use goals as the more specific of the two, while others use objectives. As an example of the former, Albrecht's schema posits that objectives can be either "fuzzies" or "goals" with goals being the specific, operational statement of the objective.

Community service applications, however, have tended to use the opposite approach whereby objectives are the measurable translation of goal statement:-

> "...an objective can be either a lower level of goal indicator accomplishment of a vital preliminary pre-requisite to the attainment of the goal. (Grabowski, 1978, pg 38)"

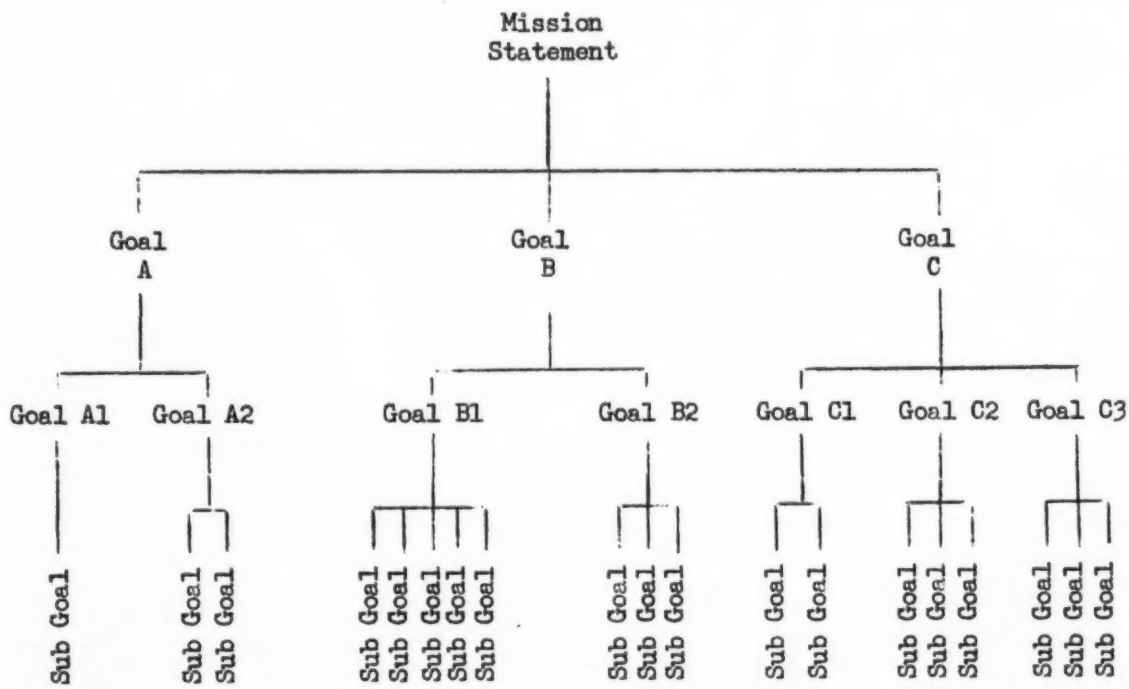
> "The primary characteristic that defines an objective is that it can be stated in operational terms. By this we mean that the objective can be stated in such a way that the extent to which it is accomplished by programs can be measured or assessed. (Drezner and McCurdy, 1979, pg 38)"

An objective then, as defined above, is simply a more specific, quantifiable and measurable version of a goal. This is the conceptualization which will be utilized in this paper.

THE HIERARCHY GOALS

Goals and objectives can be arranged in a hierarchy based upon their specificity such as illustrated in Figure II. Goals A, B, and C are more specific versions of the mission statement. Sub-goals are more specific yet and objectives are the measurable expressions of intent.

FIGURE II: A HIERARCHY OF GOALS



Suppose, for example, that one of the goals of a community based anti-vandalism program is to increase community awareness about vandalism. The two sub-goals may be a citizens committee and a public education program. The objectives for the citizens committee can then be framed around time (the schedule for setting up the committee); attendance of members; the satisfactions of committee members and committee effectiveness.

When a hierarchy such as this is set up, there are some important criteria to be used in formulating sub-goals (Drezner & McCurdy, 1979). These are as follows:

> ASSUMPTION 1. The complete set of subgoals in any branch should be collectively exhaustive. In other words, no other subgoals need to be considered and the achievement of all subgoals should completely fulfill the goal from which they derive.
>
> ASSUMPTION 2. The achievement of each subgoal should make a significant and valid contribution to the goal from which it derives. The contribution should be in tune with the spirit and intention of that goal.
>
> In other words, the step of identifying component subgoals should not simply be an exercise in logical dissection.
>
> ASSUMPTION 3. Each subgoal should be independent of other subgoals. In other words, the value of its achievement should be unaffected by the achievement of other subgoals.
>
> ASSUMPTION 4. The achievement of a subgoal should contribute only to the achievement of the goal from which it is derived and, through that goal, up the tree in a direct line to the high-level goal at the top. It should not contribute to any goals that are not in this direct line.
>
> ASSUMPTION 5. The goals and subgoals that make up the goal structure should be feasible. High-level goals and those subgoals near the top of the structure may carry some uncertainty when they could be achieved. Lower-level goals and especially those qualifying as objectives, however, should be feasible to some degree in the planning horizon. (pg 41-42)

PROCESS vs OUTCOMES

There is also some confusion about process and outcome goals. Process goals are statements of some kind of planned activity, i.e. the provision of counselling services; the development of recreational programs, etc. Outcome goals, on the other hand, are the statements of the expected results of the activity, i.e. "counselling success rates"; number of participants; satisfaction of participants, etc.

This can be conceptualized as a distinction between program inputs and outputs (Grabowski, 1978). "Outputs are things sought, inputs are resources used to achieve the outputs." (pg 37) Grabowski seems adamant that goals should always reflect outcome. As a means for assuring this, he suggests that goal statements should be written without verbs to make certain that it is not an activity (input) statement.

From an evaluative point of view, the emphasis should be on outcomes. There is, however, a definite role for process goals, particularly from the point of view of program planning. If an outcome goal is achieved, it is important to know which activities or elements of the process seemed to be most important in terms of achieving that goal. The same was obviously true of an outcome which was not achieved. For example, suppose there were three activity or process goals associated with a specific outcome goal. The outcome goal is achieved but one of the process goals is not. Apparently, therefore, that particular activity was not very important in terms of the outcome goal. That is important information for program planners.

In summary, then, outcome goals are the basis for evaluation. Process goals, however, are very important to the interpretation of the outcome results. As a simple rule of thumb, begin with two questions - "What is the program attempting to accomplish?", and "How is it going to accomplish these things?". The answer to the first question leads to the outcome goals, while the answer to the second leads to the process goals.

DEVELOPING THE HIERARCHY

The hierarchy is best developed in a "brainstorming" kind of setting. A small group of perhaps 6-12 persons who are knowledgeable about the area of work covered by the starting goal. As you work your way through the hierarchy, the goal should become more and more specific until, at the lowest level, they represent quantitative indicators of outcome.

The general steps in working through this process are as follows:

1) Given your first general goal statement, ask "How will we know if this goal is being accomplished?" or "What kind of things should we look for to see if we are making some progress in this area?"

2) In a very unstructured and "free-floating" approach, the group will then start throwing out ideas which are listed on a flip chart. Participants should feel free to throw out any ideas that occur to them, until their ideas are exhausted. The elements listed here should be somewhat more specific than the general goal but do not worry if they are not yet quantifiable.

3) The list is then reviewed to form "clusters" of ideas that appear to be interrelated or all dealing with "different aspects of the same thing". This is a fairly intuitive process which requires some discussion about each item on the list. Some may be discarded because they appear to be activity or process statements rather than outcomes.

4) Give each of these clusters a goal name, which seems to summarize their common intent. These goals then constitute the next level of the hierarchy.

5) Take one of those sub-goals or clusters and, on another flip chart or blackboard, list the elements from the original list which were relevant to that cluster.

6) Then, begin the process again by asking, "How will we know when this goal is being accomplished?" and "What kind of things should we look for to see if we are making some progress in this area?". Repeat steps 1 to 6 until you have arrived at specific, quantifiable indicators of outcome.

It is through this kind of process that you evolve from a very general statement such as "To increase the participation of women in the community" to "x number of women serving, in a meaningful fashion, on voluntary Boards in the city". The "meaningful" aspect of this goal can be measured by distributing questionnaires to women involved on the various Boards.

AN APPLICATION TO PREVENTATIVE AND SOCIAL DEVELOPMENT PROGRAMS

Consider the following general statement of program purpose:

> "To develop, through a committee of local citizens, a series of youth recreational programs to decrease vandalism to the city average in the Lansdale community."

The goal statement would read:

> A vandalism rate equal to the city average.

The reference to the citizen groups and the recreational programs describes the actions which are planned in order to achieve a reduced vandalism rate.

If this sounds rather narrow-minded to the reader, that is because it is. This introduces a unique element of preventative programs - some of the means are also ends. The involvement of citizens in solving community problems is a benefit in and of itself.

In formulating goals for preventative programs, we must therefore differentiate between participant benefits and community benefits. In the previous example, the community benefits involve decreased vandalism. The participant benefits, particularly within the citizens committee, are related to the involvement in solving community problems.

The problem, here, was in the original formulation of the purpose, which was written in such a way as to suggest that, in fact, the community involvement was only a means for decreasing vandalism. This is not an unusual problem. Authors of preventative program proposals often combine the elements of participant and community benefits into one statement of purpose in which participant benefits become relegated to a "means" role.

Begin, then, with two statements of purpose - one relating to participant benefits and the other relating to community benefits. This will result in separate goal statements for the participants and the community.

If we apply this to the original example, we end up with three goal statements:-

1. An involved committee of citizens;
2. A series of recreational programs;
3. A vandalism rate equal to the city average.

There is one further test to apply in testing the adequacy of your goals - ask why. If the answer is a general motherhood type of statement, then you probably have an adequate goal. If, however, the answer is more specific, your goal may yet need some refining.

Why do you want a series of recreational programs? If the answer is to keep the kids off the streets so they will not commit vandalism, then you do not have a goal; you have an action statement. Drop it as a goal. If, on the other hand, the answer is that recreational programs are good for kids because of the camaraderie and character-building aspects of the program, then we are back to a motherhood statement and it is probably an adequate goal statement.

At the next level of specificity, the objectives for the goal relating to "an involved group of citizens" could be -

1. Participation of "x" community representatives (from different sectors of the community).
2. Attendance rate of "x"
3. Participant satisfaction rate of "x"
4. Attainment of committee goals.

As suggested by number "4" above, the committee, in turn, may develop goals and objectives of its own which can then become the next level in the hierarchy.

The same process should be applied to the other two goals.

Leadership Skill Development

A more complex example, in a social development sense, would be one dealing with "leadership development in indigenous group". Given that starting goal, the following list was generated in a brainstorming session as a result of the question - "How will we know when this is being accomplished?".

1) Increased independence of the group, i.e. group will require less "nurturing" by development workers.

2) Better planning process in place, i.e. clearly defined goals based on group consensus.

3) More involvement in other agencies.

4) Increased number of people involved in decisions within the group.

5) Improved accessing of resources.

6) Increased activity in group.

7) Increased number of group members fulfilling leadership roles outside of the group.

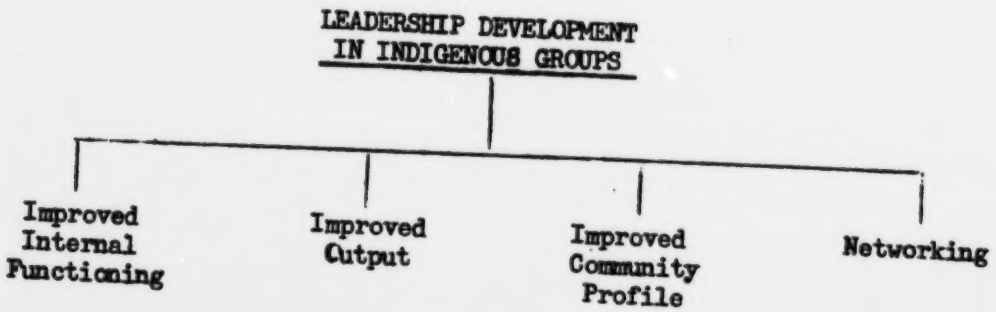
8) More output.

9) Higher profile in the community.

10) Improved perception of group by community and other groups.

11) Increased credibility with significant others.

From this listing, the following four clusters were identified - improved internal functioning; improved output; improved community profile; improved involvement with other groups and issues. The next level of the hierarchy, then, appeared as follows:



A repeat of the session with the community profile goal produced the following listing:

1) Media visibility - number of mentions in the newspaper, number of radio talk shows, etc.
2) Number of communications with other groups.
3) Number of group members involved on Boards and committees of other organizations.
4) Number of decision-making bodies including formal participation of the group.
5) Number of meetings between group and politicians.
6) Number of new Board members on group.
7) Number of group members.

This process, then, quickly yielded some powerful quantitative indicators of outcome. The lists above are used as examples and are, by no means, exhaustive. Other elements could certainly be added.

Assuming that similar lists have been generated for the other three components of the hierarchy, it is then important to priorize all of these outcomes. Obviously, any program would be hard pressed to accomplish every one of the outcomes within a given time frame.

The next three sections of this guide deal with alternative methods for carrying out the priorization based upon how many people are involved.

Given the high priority outcomes, it is then necessary to focus on activity goals - what activities must be undertaken to achieve these outcomes and how will we know when those activities have been undertaken and/or completed. This, then, is the process evaluation.

Specific indicators for the activity completion can be identified and monitored. This allows you to answer the question - "Which activities appeared to be important in achieving or not achieving this outcome?".

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IV: GOAL PRIORIZATION: INDIVIDUAL APPROACH

The priorization of goals is an important part of any goal-based evaluation. It is rare that all of the goals which are developed will be of equal importance. The attainment of some goals will usually be more important than the attainment of others and some kind of numerical weighting system should be utilized to reflect these differences.

The simplest method is to simply sit down and rate each goal in terms of its importance. This rating can be carried out on any kind of numerical scale, i.e. 0 to 100; 0 to 10; 0-5. The upper value represents the greatest importance score while the lowest value represents the least important.

In their book, "A Planning Guide for Voluntary Human Service Delivery Agencies", Drezner and McCurdy (1979) use a 100 point scale as follows:

> "STEP 1. Rank the high-level goals in the order of their importance as you view them (first for the most important, second for the next, and so on). Assign the value of 100 to the high-level goal you ranked first (that is, the most important). There is no 'magic' to 100; it just seems easier for many people to deal with. Then rate the other high-level goals relative to this most important goal. If the second-ranked goal seems about half as important, rate it 50. If the third is just a little less important than the second, you might rate it 45, and so on. Try to use as much of the scale (0-100) as you can; do not, for example, group all high-level goals between 90 and 100 if you can help it.
>
> When you have a rating for each high-level goal, review them to see if they reflect your opinions. If one goal is rated 60 and another 30, does the second seem about half as important as the first? If not, change the ratings until they better express your views. Note the form of the question: How much more (or less) is the value of one goal relative to another? Or, of course, are they of equal value?

This form is important because it helps get a valid expression of feelings that can be used later when performing arithmetical operations. It is convenient to keep the most important high-level goal rated at 100 and to change the ratings of the other goals to reflect their importance relative to this high-level goal. (pg. 53)"

In an equally excellent book, J.B. Cunningham (1978) used a weighting system whereby the sum of the weights add to 100. Conceptually, this means indicating the importance of each goal as a percentage of the importance of all the goals. Thus, if three goals are judged to be equally important, then they are all rated 33.3.

This is also the technique which Drezner and McCurdy (1979) use in priorizing the second level goals as follows:

"STEP 2. When you have the high-level goals rated, pick one of these goals and examine the component, second-level goals that evolve from it. Express your feelings about the relative contribution each of these second-level goals makes to the high-level goal in terms of a percentage. In effect, you are dividing up the value of the high-level goal among the second-level goals, so the percentages should add to 100 percent. (For example, if there are three second-level goals, you might say the first contributes 50 percent, the second 40 percent, and the third 10 percent).

Next, pick a second-level goal that is broken down into component third-level goals and repeat the process by dividing the value of that goal among its components. Continue until you reach the lowest level subgoals (objectives) in each branch, then go through the same procedure for the other high-level goals.

STEP 3. This step involves some relatively simple calculations made even simpler if you have a calculator. To see how it works, assume a high-level goal has a value of 60 and that there are two subgoals below it. Assume the first of these two was given 70 percent of the value and the second, 30 percent. To get the value of the first subgoal, multiply 60 by 70 percent (and divide by 100) and you get a resulting value of 42 for this component goal. Next multiply 60 by 30 percent (and divide by 100) and you get a resulting value 18. You have now computed the values of the two second-level goals - 42 and 18. These add up to the value of 60 attached to the high-level goal from which they derive.

STEP 4. This step is an important reminder that the process is not simply an exercise in numbers. Even if you are short of time, we recommend that you do not ignore this step.

The values attached to each subgoal by the process described in step three should still convey your preferences after the calculations. Look at the values. Do any seem out of line? If two lower-level subgoals have nearly the same number (value), are they about equally important?

When you find discrepancies between the numbers and your preferences, consider changes to better express your intent. Note that you can shift the percentages you used to divide up the value of the goal immediately above. (Remember that if you raise one percentage, you need to lower one or more others to keep the total equal to 100 percent.) Note also that you can change the rating (the value) assigned to the high-level goal. This will change the values of all subgoals beneath it.

Keep going with this review and fine tuning until you feel comfortable with the result as an expression of your preferences. Again, this is not supposed to be an exercise in numbers. If it were it would have no validity and no meaning. It is, therefore, a time-consuming task requiring a great deal of concentrated thought. If it is being done by a group it also requires a good deal of dialogue and rethinking. In actual practice, however, many agencies have found it necessary, for reasons of time, to accept an adequate expression, rather than optimal expression, of preference during the initial planning cycle. The result can still be of use in clarifying many issues and it can serve as a valid base for the remainder of this program planning system. (pg. 54-55)"

USING SPECIFIC CRITERIA

The previous ratings have all been quite subjective in nature. As you sit down to rate each goal, considerations of costs, expected success, effort involved, etc. will probably create considerable indecision. Should I rate it according to political attractiveness? Ease of success? etc. etc.

The best way of dealing with these criteria is to simply bring them out in the open and formally recognize their importance. List all

the criteria which you consider important in deciding upon a priority rating for the goals. A sample list could read:-

1) community benefit
2) cost of the program - the cheaper, the better
3) chances of success - the higher, the better
4) political attractiveness - the higher, the better
5) community readiness - the higher, the better
6) length of time needed for completion - the shorter, the better.

There are undoubtedly many others which the reader can apply to specific situations.

The criteria are, themselves, of varying importance - some are more important than others and it is, therefore, necessary to apply some kind of weighting system to them. The method described below is an adaptation of the approach described by Drezner and McCurdy (1979).

Firstly, assign a weight to each of the criteria, using any numerical scale, although the authors again used a 0 to 100 scale. Suppose the five, previously identified criteria, are rated as follows:

1) Cost of Program	60
2) Chances of Success	80
3) Political Attractiveness	50
4) Community Benefit	90
5) Community Readiness	90
6) Length of Time Required	60

Secondly, each goal should be weighted against each criteria. Again, any weighting scale can be used, but the easiest is a simple ranking system. For example, rank the goals according to the anticipated costs of achieving them - staff time, equipment costs, etc.

If we are using three goals, the cheapest will be ranked "3" and the most costly goal will be ranked "1".

The other goals are then ranked in the same manner with the "3" value corresponding to the most desirable state - i.e. cheapest, greatest chance of success, greatest community benefit, etc.

The easiest way to do this is to set up a matrix, as exemplified in Figure IIIa. The numbers in the top row are the criteria weights and the number in the upper left hand corner of each box are the goal weights.

The third step is to multiply each pair of goal weights and criteria weights and write the product in the appropriate box as shown in Figure IIIb.

Each of these values is then summed for each goal to yield an overall priority score for each of the three goals, as in Figure IIIc.

This priority score indicates the relative importance of each goal according to that set of criteria. They can be reduced to a more manageable size by dividing each score by 10 or 100.

This method can then be applied to second level goals, if you wish. It may, however, simply be easier to use the method discussed earlier for these goals and objectives.

Up to this point, the methods of goal priorization which have been discussed have been carried out on an individual basis. You may, however, want to use a group of persons to carry out the priorization. The use of a group is, of course, somewhat more complicated but there are standardized procedures which can simplify the proceedings. These procedures will be discussed in the next section.

FIGURE III: GOAL/CRITERION MATRIX

a)

	Criteria				
	I 60	II 80	III 50	IV 60	V 90
Goal A	1	3	2	2	3
Goal B	3	2	1	2	1
Goal C	1	3	3	1	2

b)

	Criteria				
	I 60	II 80	III 50	IV 60	V 90
Goal A	1 60	3 240	2 100	2 120	3 270
Goal B	3 180	2 160	1 50	2 120	1 90
Goal C	1 60	3 240	3 150	1 60	2 180

c)

	Criteria					
	I 60	II 80	III 50	IV 60	V 90	
Goal A	1 60	3 240	2 100	22 120	3 270	790
Goal B	3 180	2 160	1 50	2 120	1 90	600
Goal C	1 60	3 240	3 150	1 60	2 180	690

REFERENCES

Cunningham, J.B. Community Program Evaluation: A Suggested Approach, Ministry of the Solicitor General, Ottawa, 1978.

Drezner, S.M. and McCurdy, W.B. A Planning Handbook for Voluntary Social Welfare Agencies, N.Y.: The Family Service Association of America, 1979.

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V: THE DELPHI METHOD

One of the most popular structured decision-making procedures is the Delphi method, originally developed by the RAND Corporation in the United States. It is a method for structuring group decisions through voting, feedback and dialogue with the main aim of arriving at consensus. As with any general approach, it comes in a variety of different forms and the one discussed here is one of the simpler approaches.

In terms of its application to assigning priority ratings to goals, the steps in implementing a Delphi process are as follows:

1) Each group member would privately rate the priority of each goal on some standard numerical scale, such as the 0 to 100 scale utilized in the previous chapter. In this presentation, a simple 1 to 10 rating scale will be utilized where "1" represents very low priority and "10" represents highest priority.

2) Their responses are then turned into a co-ordinator who plots the responses on a graph, such as the one presented in Figure IV. The members do not identify themselves on the form which they turn in so their confidentiality is assured.

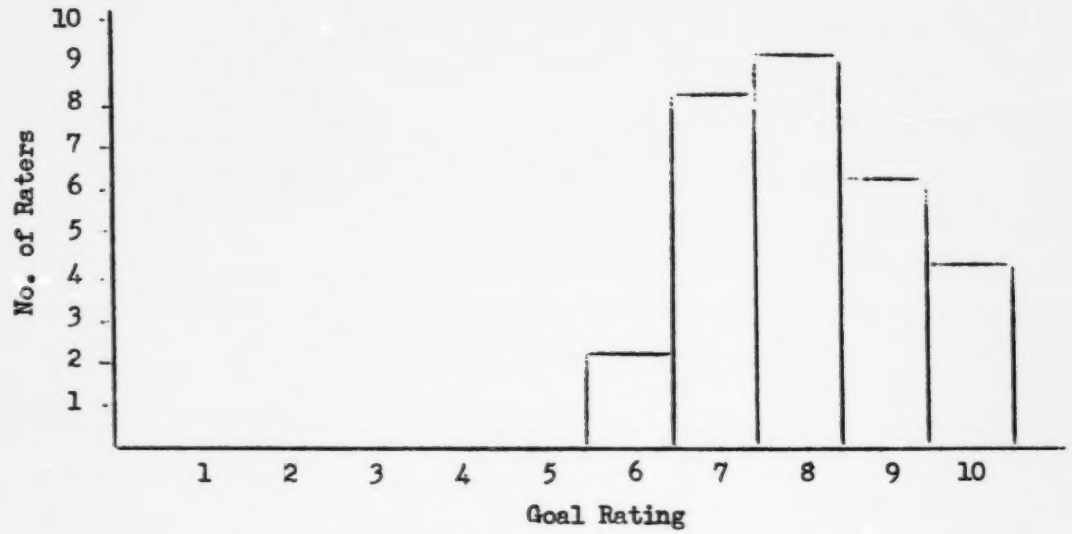
3) The graph is then displayed to the group and discussion follows. Individuals are free to argue for the various priority ratings.

4) Step 1 is then repeated with the members again rating each priority in light of the discussion. The results are then turned in once more, graphed and the graph is displayed.

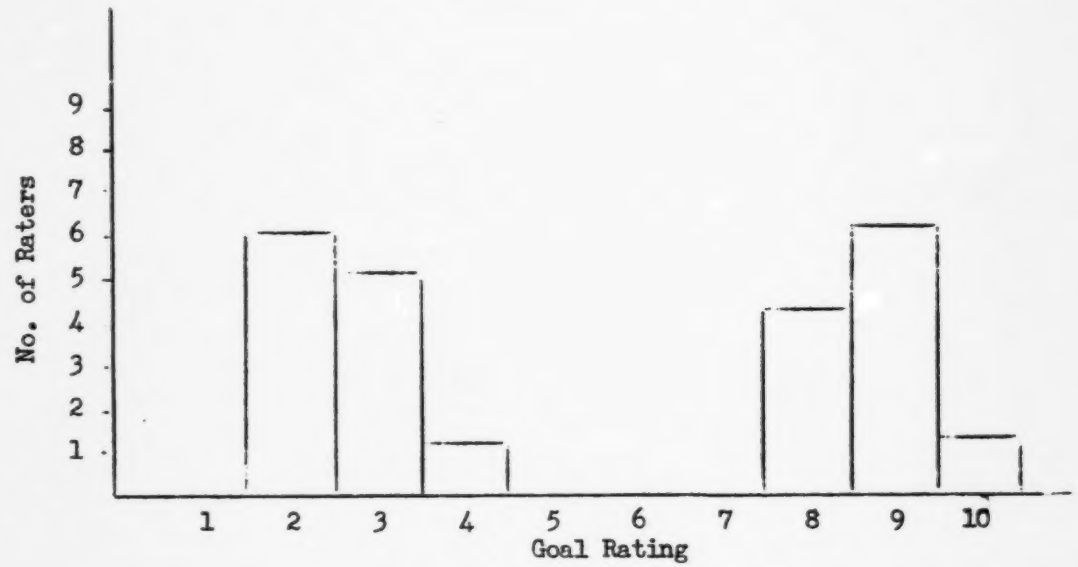
5) This process continues until either consensus is reached or there is no change in the graph after two or three tries.

FIGURE IV: GRAPHING DELPHI RESULTS

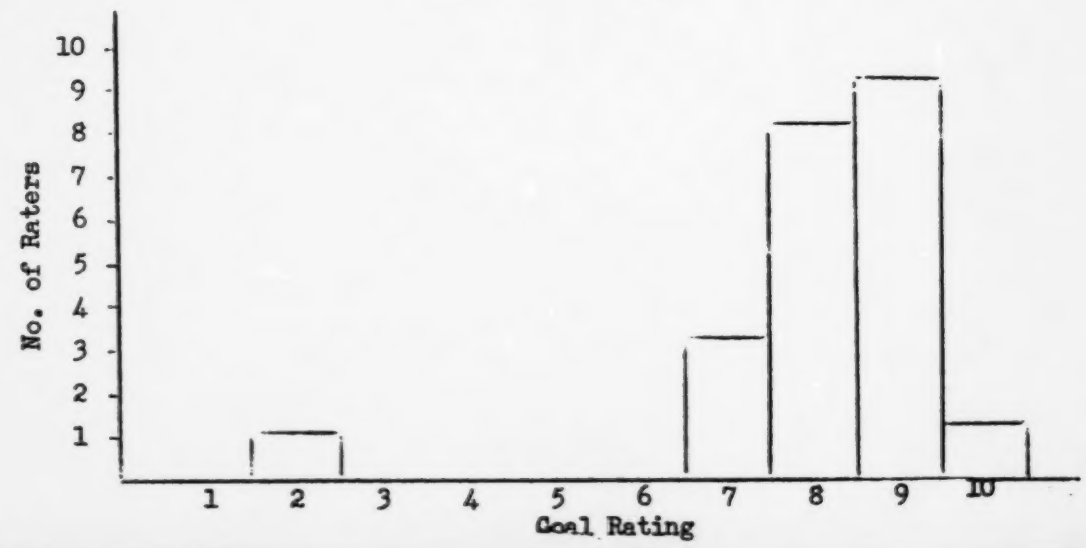
a)



b)



c)



INTERPRETING THE GRAPH

This graph is one of the easiest ways of displaying and measuring consensus. There are more sophisticated statistical methods for measuring the actual amount of consensus in a group but for the purpose of the present utilization, the graph works fine.

Figure IVa shows the graph of a group which has arrived at a fair degree of consensus. There is not a total agreement but, then, in any heterogeneous group, it is probably not reasonable to expect total consensus. For the overall group rating, the individual responses are averaged.

Figure IVb shows the responses of a hypothetical group which contains two polarized factions. If, in such a situation, the two groups do not come any closer together after more discussion, your only alternative is to take the average rating which will be somewhere in between the two groups.

Figure IVc shows a situation where there is one individual in the group who refuses to be moved by the opinion of the rest of the group. If this arises, you can take the average of the group or it is also acceptable to simply drop the extreme value.

USING CRITERIA

Up to this point, the procedure has involved the group in the subjective weighting of the goals. If there is a perceived need for some criteria to be used, as described in the previous chapter, then the Delphi has to be used twice - once to arrive at the criteria ratings and once to arrive at the goal ratings.

The average group criteria and goal ratings are then combined, as described in the preceding chapter, to arrive at the priority scores for the goals.

USING SECOND LEVEL GOALS AND OBJECTIVES

This process can also be applied to second level goals and objectives, as described previously. In this situation, it is best to use the "percentage scale" whereby values ranging from 0 to 100 are applied to each second level goal or objective such that they sum to 100 (see preceding chapter).

GROUP SIZE

There is no ideal group size for using the Delphi method. However, as the group gets larger, discussion sometimes becomes unwieldy and smaller sub-groups should be formed.

The Delphi does assume that you can get all the necessary people together into some kind of meeting area. Sometimes this may not be possible or the really ambitious program planner may want to solicit community opinion on a scale which is larger than can be comfortably applied to the Delphi approach. If this is the case, a questionnaire-based approach, which is described in the next chapter, can be utilized.

DELPHI READINGS

Dalkey, N. & Helmer, O. "An experimental application of the Delphi method to the use of experts", Management Science, April, 1963.

Drezner, S.M. & McCurdy, W.B. A Planning Handbook for Voluntary Social Welfare Agencies, N.Y.: The Family Service Association of America, 1979.

Kumaran, K.; Hansen, R.C.; Rowe, M. "The Delphi technique in a psychiatric hospital", Dimensions in Health Science, August, 1976, 32-35.

Pill, J. "The Delphi Method: Substance, Context. A Critique on an annotated bibliography", Socio-Economic Planning Science, 5, 1971, 57-71.

VI: SOLICITING COMMUNITY INPUT

J. Barton Cunningham (1978) has written an interesting publication on the use of an evaluative technique called "Functional Goal Evaluation". The method contains procedures for soliciting general community responses for program goals and their attainment.

The steps in utilizing this procedure for priorizing goals and objectives are as follows:

1) Identify the groups within the community from whom a response is required. Cunningham was concerned with police programs and his groups were high school students, juveniles in conflict with the law, R.C.M.P. and community at large.

2) Construct a questionnaire which presents the program goals and requires the respondents to rate these goals in terms of their importance on a percentage scale. Second level goals can also be included and rated in the same fashion.

Cunningham employed six general goal areas - crime prevention; criminal investigation; traffic control; community education; administrative co-ordination and efficiency; public image. As indicated above, all of the respondents rated the importance of these goals on a percentage scale such that the total weights of all the goals summed to 100.

At the second level, Cunningham employed a number of dimensions, many of which were activity statements rather than goals. As an example, the following sub-categories were used for the crime prevention goal area - working with and helping teenage offenders; developing positive feelings with students in the school system; skillfully dealing with family problems and disputes; developing police/student sports

activities; ability to refer problems away from court; the R.C.M.P.'s ability to lower criminal offences and vandalism. These six dimensions were also rated on a percentage scale.

One of the advantages of this method lies in its ability to yield data about the sometimes conflicting expectations of different groups within the community.

For individuals who are interested in pursuing this approach, the Cunningham publication includes the work sheets and forms which are needed for carrying out the process.

REFERENCE

Cunningham, J.B. Community Program Evaluation: A Suggested Approach, Ministry of the Solicitor General, Ottawa, 1978.

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VII: SCALING GOAL ATTAINMENT

It is unlikely that, in most circumstances, goal attainment can be measured on a simple yes/no basis. It is usually helpful to think in terms of "levels" of goal attainment and, correspondingly, "levels" of program success. The method which can be utilized in this situation is goal attainment scaling (Kiresuk and Sherman, 1968). This method, which was originally designed for use in clinical evaluations is sufficiently general in nature to be applied to almost any setting. It applies equally well to outcome and process objectives.

A sample goal attainment scale is presented in Figure V.

The approach is fairly simple. Each goal is re-written in terms of levels of attainment, with the middle level being the expected outcome. In the example of Figure V, a vandalism goal has been utilized and scaled to five levels based upon the city average vandalism rates. The outcomes are scored from -2 to +2 as indicated.

Figure VI shows a worked example for a series of sub-goals under a general "Formation of a Committee Goal". Each of the four sub-goals has been weighted according to importance. For the sake of simplicity, a weight of five was attached to goals 3 and 4, while goals 1 and 2 were given a weighting "3". In fact, any of the previously described methods could have been utilized.

The last goal, "committee goals", would relate to a further set of goal attainment scales which would have been developed to measure the outcome of the committee activities. That score would be transferred to this form as part of the overall evaluation.

FIGURE V: A GOAL ATTAINMENT SCALE

Goal: To reduce the rate of vandalism in the Lansdale neighbourhood to the City average		
Outcome	Score	Indicator
Much less than expected results	-2	Vandalism rate more than 10% above City average
Moderately less than expected results	-1	Vandalism rate 5% to 10% higher than City average
Predicted or expected results	0	Vandalism equal to City average + 5%
Moderately more than expected results	+1	Vandalism rate 5% to 10% less than City average
Much more than expected results	+2	Vandalism rate more than 10% lower than the City average

FIGURE VI: A SET OF GOAL ATTAINMENT SCALES

	Frequency of Meetings (importance=3)	Attendance of Members (importance=3)	Satisfaction of Members (importance=5)	Committee Objectives (importance=5)
Much less than expected results - 2	less than monthly	- 50%	Average rating equal to "very dissatisfied"	GAS Score of -2
Moderately less than expected results - 1	monthly	51-70%	Average rating equal to "dissatisfied"	GAS Score of -1
Predicted or expected results 0	bi-weekly	Average of 71-80% attendance	Average rating equal to "satisfied"	GAS Score of 0
Moderately more than expected results + 1	weekly	81-90%	Average rating equal to "very satisfied"	GAS Score of +1
Much more than expected results + 2	more than weekly	+ 91%		GAS Score of +2
Outcome Score	(+1) x (3) = 3	(-1) x (3) = -3	(0 x 5) = 0	(1) x (5) = 5

Total Outcome Score = 3 + (-3) + 0 + 5 = 5

Total Importance Score = 3 + 3 + 5 + 5 = 16

GAS Score = $\frac{5}{16}$

= .31

SCORING THE SCALES

One of the advantages of this system is that it allows for the calculation of a numerical, goal attainment score. This score is calculated as follows:

1) For each scale, multiply the outcome score +2 to -2 by the weight;
2) Add these products across the scales to calculate a total score (pay attention to the positive and negative signs);
3) Divide these numbers by the sum of the weights used;
4) The resulting goal attainment score should range, again, from +2 to -2. This indicates the overall level of outcome for that particular set of goals.

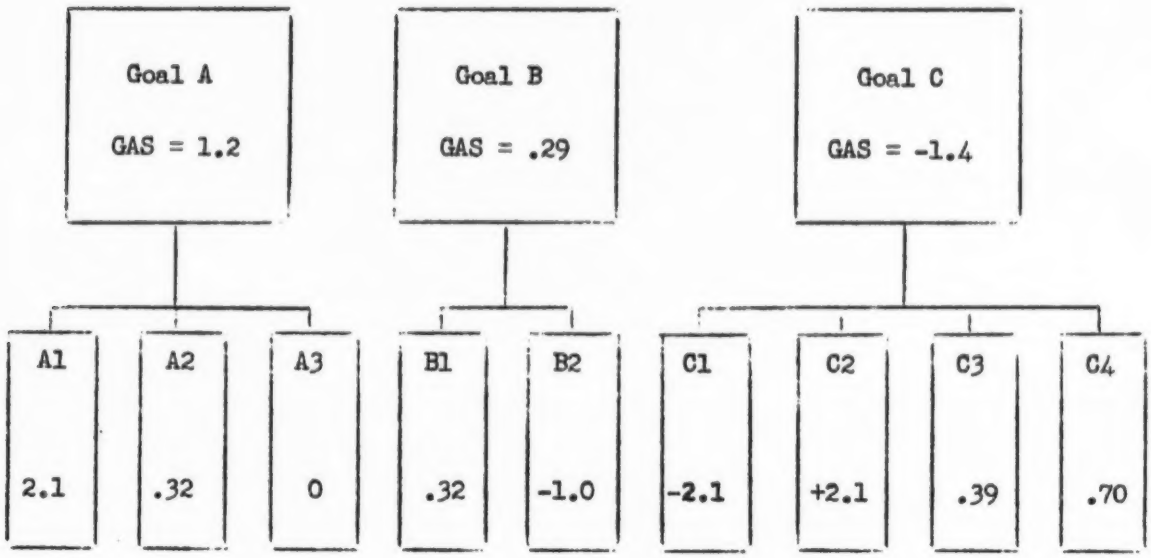
These calculations are shown for the example in Figure VI. By this method, the resulting score can range anywhere from +2 to -2. The score of .31 indicates an outcome which was slightly better than expected. (The hypothetical outcomes in this example are shown by the check marks.)

This method, then, yields a simple quantitative indicator of goal attainment. Each goal and set of sub-goals can be scaled in the same manner yielding a goal attainment structure such as the one presented in Figure VII.

In this hypothetical example, Goal A had a positive outcome which was somewhat better than expected. Moving to the sub-goals, this seems to be largely due to the success of sub-goal A-1.

Goal B had an outcome which was consistent with expectations of the planners. At the sub-goal level, however, the outcome of Goal B2 was less than expected. Apparently, however, that particular sub-goal was not particularly important in the attainment of the overall program goal.

FIGURE VII: HYPOTHETICAL GOAL ATTAINMENT STRUCTURE



The outcome of Goal C did not live up to the planners expectations, apparently as a result of a failure to achieve sub-goal C1. Sub-goal C2, however, seems to have been a raving success. Apparently, therefore, the attainment of C1 was a more important pre-requisite for the attainment of Goal C, than was sub-goal C2.

If this structure was continued to another level of sub-goals or objectives, then it might be possible to find out what went wrong with sub-goals B2 and C1.

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Cytrybaum, S. "Goal Attainment Scaling, A Critical Review", Evaluation Quarterly, Vol. 3, 1, 1979, 5-40.

Kiresuk, T.J. and Sherman, R. "Goal Attainment Scaling: A General Method for Evaluating Comprehensive Community Mental Health Programs", Community Mental Health Journal, Vol. 4, 1968, pg 443-453.

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